

USSN 09/840,859

Remarks

As of the latest Office Action, Claims 1-9, 11-66 and 113 were pending in the application. By the foregoing amendment, Applicants have amended claims 2, 5, 7-9, 11, 14, 15, 18, 19, 20, 23, 24, 26, 30-34, 36-38, 41-43 and 47, cancelled claims 1, 3, 4, 6, 13, 16, 17, 21, 22, 39, 40, 45, 46, 60-66 and 113, and added new claim 114. As discussed below, it is believed that the foregoing amendments place the claims, as now presented, in proper form for allowance and are allowable over the art of record.

Interview Summary

Applicants' representative wishes to express his thanks to the Examiner for the interview held on 13 December 2005. In advance of the interview, Applicants submitted a proposed new claim, which is now presented as new claim 114. During the interview the Examiner affirmed that the new claim would overcome the 35 USC 112 rejections of record. The Examiner noted the fact that the claim now required reversibility and presented a much more narrowed scope but was non-committal with respect to the allowability of the same. Rather the Examiner requested that Applicants present support for the claim of reversibility as well as specifically point out where the specification supported each of the limitations now presented in the independent claim. Discussion was also presented on the distinguishing features over the cited art; however, the Examiner similarly requested that those arguments be presented in a formal response as well.

Claim Support

All of the limitations of new claim 114 are fully supported by the original specification and claims: no new matter has been entered. For ease of understanding and clarification, new claim 114 is hereby presented with the insertion of a parenthetical following each limitation or related series of limitations identifying the supporting reference to each such limitation.

A reversible (paragraph 56), induction activatable fastening device for promoting the assembly and disassembly of associated pieces upon exposure to electromagnetic energy in the range of from 1.0 to 1000 kHz (claim 17), said fastening device comprising a susceptor sheet having a thickness of no greater than about 2 mils (claim 3) and a thermoplastic adhesive whose softening temperature is at least 60°C (claim 22) on at least one surface of said susceptor, (i) wherein the thermoplastic adhesive, as applied to said at least one surface, contacts from about 1% to about

USSN 09/840,859

65% of the surface area of said susceptor and has a pattern such that at least about 75% of the area of surface contact between the adhesive and said susceptor can have inscribed within it circles having a diameter of from about $\frac{1}{2}$ " to about 0.001"(paragraph 54) and (ii) wherein the thermoplastic adhesive on said at least one surface of the susceptor is applied in such a manner that a) when in touch contact with a substrate congruent in shape to the susceptor, a Test Surface, from about 1% to about 65% of the surface area of the Test Surface is in contact with the thermoplastic adhesive and at least about 75% of that contact area can have inscribed within it circles having a diameter of from about $\frac{1}{2}$ " to about 0.001" (paragraph 52) and b) when in bonded relationship with said Test Surface, from about 1% to about 65% of the surface area of the Test Surface is in contact with the adhesive (paragraph 56); the bonded relationship having been established by mating the adhesive device and the Test Surface under a force of about 5psi and heating the same to a temperature that is about 10°C above the melt temperature of the thermoplastic adhesive for a sufficient time to allow the thermoplastic adhesive to melt (paragraph 60).

Clearly all of the limitations and phraseology employed in restructuring the independent claim are supported by the application as originally filed. The amendments to the remaining claims either delete matter; thereby narrowing their scope; amend their dependency in light of the cancellation of many claims; or correct obvious editorial omissions, such as the above-referenced substitution of "pressure sensitive" for pressure activated in claim 55, and, therefore, are fully supported and do not enter new matter. Therefore, all of the amendments should be entered.

§112, 2nd Paragraph Rejections

In paragraph 2 of the Office Action, Claims 1-9, 11-66 and 113 were rejected under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In light of the cancellation of Claim 1, 60 and 113 and the presentation of new independent Claim 114 and of the Examiner's acknowledgement during the Examiner Interview and in the Examiner's Interview Summary that the new claim language overcomes the §112 rejections, it is believed that this rejection is now moot.

USSN 09/840,859

§112, 1st Paragraph Rejections

In paragraph 3 of the Office Action, claims 1-9, 11-66 and 113 were rejected under 35 USC 112, first paragraph, as failing to comply with the enablement requirement. The Office Action states that the claims contain subject matter which is not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. More particularly, it states that the claims appear to describe embodiments which are not believed set forth in the specification and which are not in certain instances believed capable of existing. In making this rejection focus was made towards the discussion of the test surface and the application of the same in Claims 1, 60 and 113. Similar rejections were made in relation to dependent claims 23 and 55, particularly with respect to their reference to "pressure-activated adhesive" and nestable tape", respectively. Finally, it was alleged that claims 61 and 62 were duplicative of one another.

Although not mentioned in the Examiner's Interview Summary, it was the undersigned's recollection that these issues were deemed overcome by the new claim language as well. Regardless, in light of the cancellation of claims 1, 60 and 113 and the clear and concise language of claim 114, which, as noted above, overcomes the §112, second paragraph, concerns, it is believed that the rejection based on the concept of pre-bonding, post-bonding and test pieces is now fully addressed and overcome by the claim language of new independent claim 114. Relative to claim 23, the foregoing amendment has amended the claim language to read on "pressure sensitive adhesives", which change is fully supported by the specification at, among other sections, paragraph 38, 39 and 42, where the draftsman employed the terms "pressure activated adhesives" and "pressure sensitive adhesives" interchangeably. With respect to claim 55, Applicants have defined the term "nestable tape" at paragraph 70. Finally, with respect to claims 61 and 62, both claims have now been cancelled and their rejection is thereby rendered moot.

In light of the foregoing discussion, it is believed that all §112, first paragraph, concerns have been fully addressed and, consequently, the rejection should be withdrawn. The claims, as now presented, are in proper form for allowance and swift and early allowance is respectfully requested.

USSN 09/840,859

Art Rejections

Claims 1-9, 11-66 and 113 stand rejected under 35 USC 103(a) as being unpatentable over either Perrin et. al. or Jackson et. al., each taken in view of Brooks, cited as evidence of the state of the art, substantially for the reasons of record as well as the following additional observations. As in the prior Office Action, the Examiner reiterates his belief that the present claims merely read upon "a thin, presumably metal sheet characterized as a 'susceptor' which is coated with a suitable heat activatable adhesive on at least one surface." Further the Patent Office contends that in order to meet the claimed performance parameters regarding its relationship with the congruent test surface one could employ a wide variety of flat surfaces as shown by the references or that such would be inherent in the references or an obvious optimization to one of ordinary skill in the heat transfer laminate art. With respect to the particular geometric patterns that the adhesive may take, the Examiner points to Brooks, Col. 3, line 31-37, particularly lines 35-37, as showing that the adhesive may be provided in almost any pattern, either as a continuous layer or in either a longitudinally extending ribbon or bead, or as individual beads or the like and of the size dimensions that applicants claim. The Patent Office then goes on to question the sufficiency of the showing of the Holzer affidavit in view of the breadth of the claims as presented as well as the validity of Applicants' prior arguments of Brooks teaching away from the use of patterns in light of the broad teaching of Brooks.

Applicants respectfully traverse the rejection and requests consideration for the reasons set forth in their prior responses, which are hereby incorporated by reference, and, in particular, the Declaration of Mark R. Holzer accompanying the response to the Office Action dated June 24, 2003, a copy of which is attached hereto, and the reasons set forth below.

As discussed in Applicants' prior responses, Jackson et. al. teach hot melt adhesive compositions having improved bond aging characteristics. These adhesives may be applied in a molten form with a spatula or regular extrusion equipment or as a film between the surfaces to be bonded (Jackson, Col. 4, lines 52-56). In the examples, Jackson employs a 1 inch wide strip of 6 mil, tin-free steel (Col. 6, lines 5-7) to which a "... molten polymer is evenly spread...over a 2 inch length with a wooden spatula" (Col. 6, line16-18). Although Jackson mentions that the adhesive may be applied as small particles to a hot surface which melts the adhesive which is then spread across the surface, Jackson does not expressly or inherently teach or disclose a substrate having a

USSN 09/840,859

pre-applied pattern of an induction activatable adhesive, let alone one meeting the strict limitations of the present invention.

Similarly, as discussed in Applicants' prior responses, Perrin et. al. teach a device for bonding and sealing components of a container for preventing unauthorized refilling or tampering of the contents of the container. As shown, the adhesive film is a continuous film coving 100% of the susceptor. Indeed, as previously noted, such a continuous film would seem to be critical to provide the seal that is desired of Perrin et. al.'s application. Further, no recitation is made with respect to the dimensions of the susceptor or adhesive. Thus, there is no express or inherent teaching of the limitations with respect to the susceptor or the pattern of the adhesive.

Contrary to the assertion of the Patent Office, reliance upon Brooks does nothing to overcome the failings of the primary references. The assertion that Brooks teaches that "the adhesive may be provided in almost any pattern, either, e.g., as a continuous layer or in either a longitudinally extending ribbon or bead, or as individual beads or the like and the size dimensions that Applicants claim" is a mischaracterization of what Brooks says. Specifically, reference to "almost any" infers that Brooks teaches some limitation, yet it clearly does not. Furthermore, Brooks provides no guidance or suggestion whatsoever as to the size or dimensions of any patterns that may be applied. Finally, Applicants stand by their characterization that Brooks teaches away from their claimed patterns. Brooks, in almost an afterthought, discloses that patterns and beads of the adhesive may be employed, but makes abundantly clear that a film or layer of adhesive that substantially covers the surface of the foil is preferred. If the preference is one way, going in the opposite direction is inherently, if not explicitly, a teaching away.

Regardless, while Applicants continue to maintain that the broad claims as previously presented are patentable over the cited art (and, as such, hereby preserve their right to file a continuation application to such claims), in the interest of expediting allowance and issuance of a patent, Applicants have now presented a new independent claim that focuses on a more narrow, critical aspect of the present invention, i.e., reversibility. The concept and attributes of reversibility, particularly reversibility with minimal, if any, damage to the underlying substrate surface, are repeated throughout the specification including paragraphs 2-4, 8, 15, 16, 29, 47, 52, 56, 57, 68, 74 and 76. None of the cited art mentions or suggests that one can prepare fastening devices that can be readily bonded and debonded by induction activation. More specifically, none of the art

USSN 09/840,859

teaches, suggests or infers that induction activatable fastening devices having adhesive patterns meeting the distinct limitations and characteristics as presently claimed can be readily debonded using an induction tool with little if any damage to the surface of the underlying substrate while also, if desired, allowing for the possibility of preserving the reuseability of said fastener or article to which it is attached. For example, at Paragraph 47 of the specification, exotic woods that are bonded to a substrate with the fastening devices of the present invention may be reused; thus, avoiding the discarding of such expensive materials.

The sensitivity of the claim limitations to achieving good debonding with minimal, if any damage is fully exemplified in the attached affidavit of Mark Holzer, the original of which accompanied Applicants' response of November 22, 2003. Clearly, the use of adhesive films and adhesives applied across the whole of the susceptor, as taught and preferred in the cited art, lead to significant damage to the underlying substrate when one attempts to debond the same. While one may presuppose damage to be lessened with less than 100% coverage, it is surprising to find that similar quantities of adhesives when applied to a substrate in accordance with and outside of the present claimed limitations provide distinctly different debonding performances, the former manifesting little if any surface damage, particularly in comparison to the former. Specifically, as seen in comparing Samples 2 and 4 and Samples 3 and 5 of the Holzer Affidavit, Samples 2 and 3 being within the scope of the present claims and Samples 4 and 5 failing to meet the claim limitations, adhesive patterns in accordance with the present claims manifested markedly less damage than those not meeting the present claim limitations even though both examples of each set provided the same overall bond area, 30% and 60% coverage, respectively. Even more surprising is the fact that larger quantities of adhesive when applied in accordance with the limitation of the present claims manifest less damage upon debonding than smaller quantities not applied in accordance with the present claim limitations. Specifically, as seen in comparing Sample 3 with Sample 4, the former manifested markedly less damage than the latter even though the bond area of the former was twice that of the latter, i.e., 60% coverage versus 30% coverage. Nothing in the art would have suggested that such a result were possible.

In view of the new, narrowed claim scope and the foregoing discussion, it is believed that the claims as now presented are clearly distinct from and patentable over the combined teachings of

USSN 09/840,859

the cited art. Thus, it is respectfully requested that the rejection be withdrawn and the claims passed on to allowance.

Petition For Extension of Time

By this response, Applicants hereby petition for a two-month extension of time; thereby extending the response period from November 1, 2005 to January 2, 2006, January 1, 2006 falling on a Sunday as well as a Federal holiday. Attached is a Credit Card Authorization for payment of the Petition Fee in the amount of \$450.00.

Claim Fees

No additional claims fees are necessary as the number of independent claims and claims overall remaining in the application are less than previously paid for. Specifically, by this amendment, the number of independent claims has been reduced to one and the total number of claims has been reduced by 13.

Conclusions

In light of the foregoing amendments and discussion, Applicants believe that all rejections have been fully rebutted and overcome. Applicants believe the present application and claims are now in condition for allowance and early and favorable consideration is hereby requested. Should there be any questions, please contact the undersigned, Applicant's attorney.

Respectfully submitted,



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